

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P589674

Luminaire Tested: **FMR-24-2-LD4-4LO-35-UNV-82-94-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589674  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/8/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FMR-24-2-LD4-4LO-35-UNV-82-94-EDD  
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

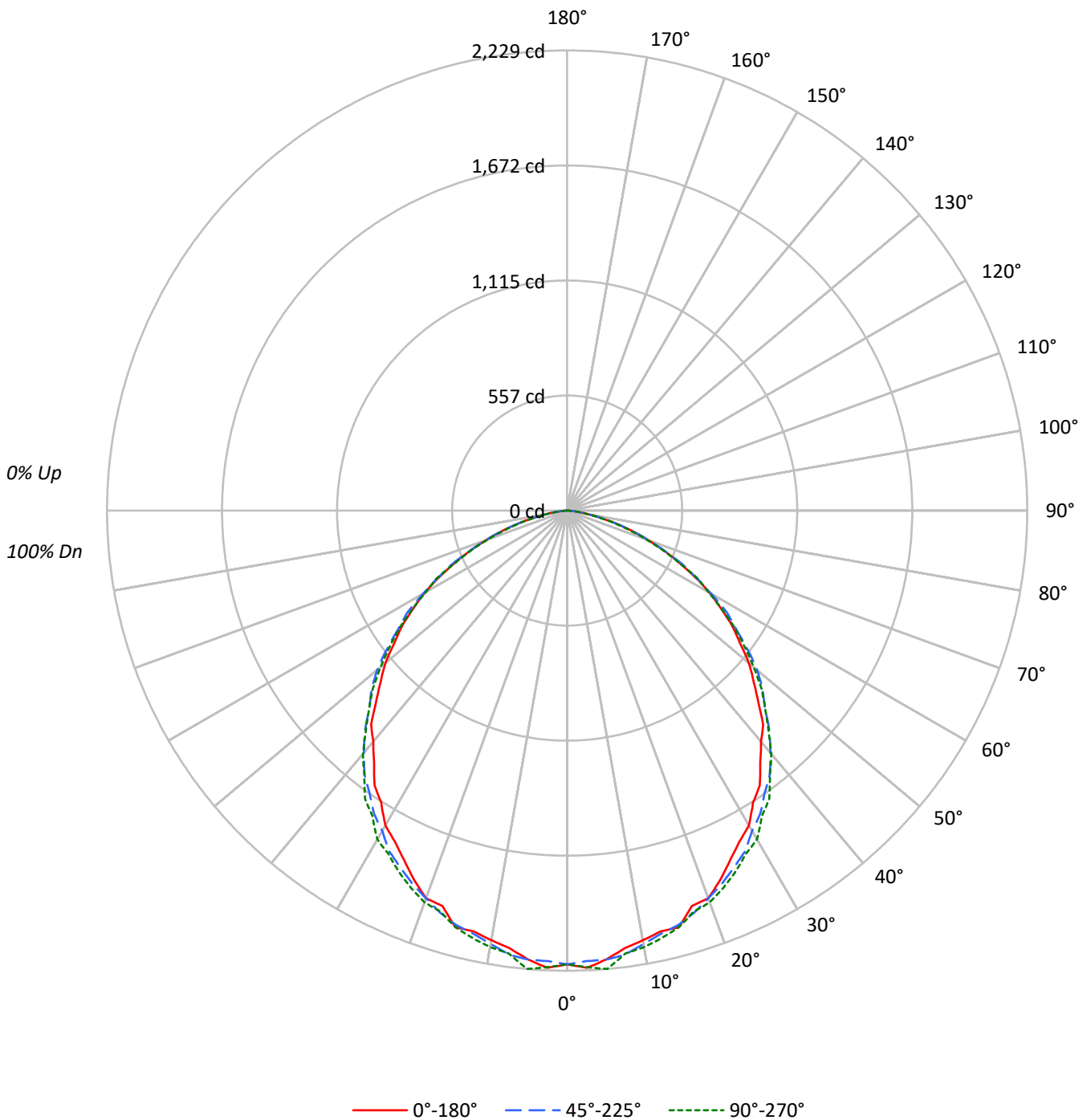
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5539.0 lumens  
Efficiency: N/A  
Efficacy: 118.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 46.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5914	5914	5914
5°	5894	5897	6021
10°	5775	5825	5866
15°	5821	5789	5821
20°	5722	5722	5783
25°	5546	5668	5730
30°	5470	5566	5715
35°	5342	5481	5604
40°	5134	5381	5405
45°	4978	5155	5163
50°	4815	5032	4936
55°	4587	4677	4644
60°	4290	4332	4255
65°	3825	3922	3798
70°	3282	3293	3201
75°	2599	2593	2493
80°	1742	1692	1627
85°	945	939	877



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	206.7	3.7
10°-20°	585.9	10.6
20°-30°	877.8	15.8
30°-40°	1040.4	18.8
40°-50°	1042.3	18.8
50°-60°	884.7	16.0
60°-70°	596.5	10.8
70°-80°	262.1	4.7
80°-90°	42.6	0.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1670.4	30.2
0°-40°	2710.8	48.9
0°-60°	4637.8	83.7
0°-90°	5539.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5539.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2198	2198	2198	2198	2198	
5°	2182	2177	2183	2176	2229	206
15°	2089	2065	2078	2089	2090	582
25°	1868	1878	1909	1934	1930	864
35°	1626	1631	1668	1707	1706	1010
45°	1308	1332	1355	1390	1357	1012
55°	978	971	997	990	990	870
65°	601	593	616	592	596	597
75°	250	245	249	232	240	268
85°	31	30	30	30	28	44
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2197.7	2197.7	2197.7	2197.7	2197.7
2.5°	2216.7	2200.0	2184.4	2202.6	2213.6
5°	2182.1	2177.0	2183.0	2176.5	2228.9
7.5°	2137.3	2156.9	2168.2	2161.1	2164.3
10°	2113.5	2106.6	2131.9	2149.5	2146.9
12.5°	2087.9	2098.1	2099.6	2118.6	2120.3
15°	2089.3	2065.2	2078.0	2088.8	2089.6
17.5°	2008.2	2034.3	2043.1	2067.8	2037.1
20°	1998.3	1979.2	1998.3	2023.5	2019.5
22.5°	1937.2	1916.0	1956.8	1979.2	1977.8
25°	1868.0	1878.2	1908.9	1933.8	1929.9
27.5°	1807.3	1819.2	1862.9	1897.2	1875.1
30°	1760.5	1754.5	1791.4	1822.0	1839.1
32.5°	1676.7	1698.3	1741.4	1771.8	1755.6
35°	1626.0	1630.8	1668.5	1707.1	1706.0
37.5°	1537.1	1559.6	1612.6	1623.4	1613.5
40°	1461.4	1483.8	1531.7	1543.4	1538.6
42.5°	1405.5	1409.4	1450.6	1463.9	1442.6
45°	1308.1	1332.5	1354.7	1389.6	1356.7
47.5°	1225.3	1236.6	1284.3	1293.7	1276.4
50°	1150.1	1154.1	1202.0	1190.4	1179.0
52.5°	1055.6	1072.3	1099.3	1097.0	1083.7
55°	977.8	971.3	996.9	990.0	989.8
57.5°	884.5	895.8	916.8	906.1	888.7
60°	797.1	797.4	805.0	792.8	790.6
62.5°	699.8	703.2	704.9	689.8	714.2
65°	600.7	592.8	616.0	592.5	596.5
67.5°	509.6	513.6	511.3	496.6	502.3
70°	417.1	422.2	418.5	401.8	406.9
72.5°	332.6	326.3	330.3	309.3	318.9
75°	250.0	244.9	249.4	231.8	239.8
77.5°	170.3	174.2	171.4	162.0	167.4
80°	112.4	109.2	109.2	103.9	105.0
82.5°	65.5	62.4	61.6	59.9	62.4
85°	30.6	29.8	30.4	29.5	28.4
87.5°	11.1	11.4	11.4	10.8	10.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)